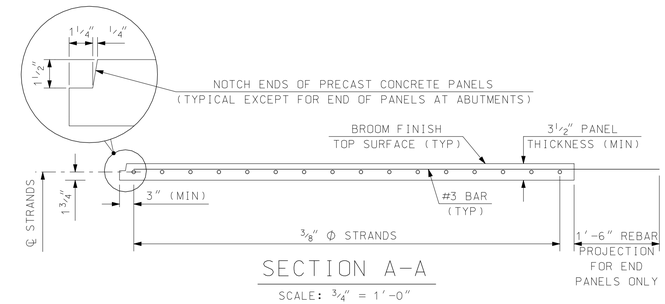
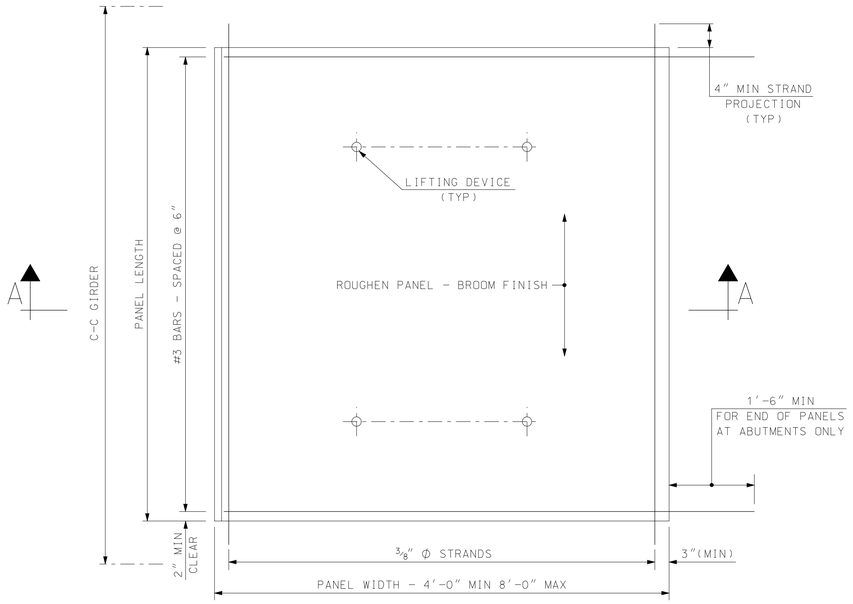


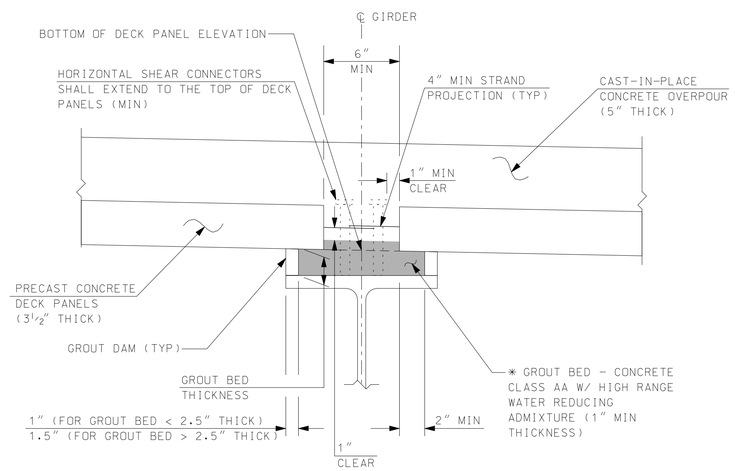
SECTION A–A

SCALE: 3/4" = 1'-0"



DECK PANEL DETAIL

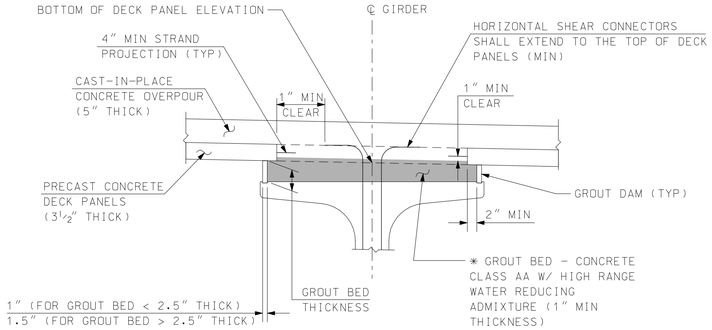
SCALE: 3/4" = 1'-0"



* ENSURE GROUT FLOWS UNDER PANEL FOR COMPLETE BEARING

STEEL GIRDER HAUNCH DETAIL

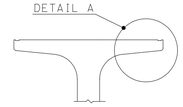
SCALE: 2" = 1'-0"



* ENSURE GROUT FLOWS UNDER PANEL FOR COMPLETE BEARING

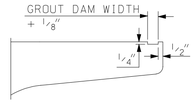
BULB-TEE GIRDER HAUNCH DETAIL

SCALE: 3/4" = 1'-0"



BULB-TEE TOP FLANGE DETAIL

SCALE: 1/2" = 1'-0"



DETAIL A

SCALE: 1 1/2" = 1'-0"

TABLE A – DECK PANEL DESIGN (STEEL-GIRDER)

C-C GIRDER SPACING	PANEL LENGTH	PANEL THICKNESS	f'ci (PSI)	f'c (PSI)	STRAND SPACING
5'-6"	5'-0"	3 1/2"	4000	6000	8"
6'-0"	5'-6"	3 1/2"	4000	6000	8"
6'-6"	6'-0"	3 1/2"	4000	6000	8"
7'-0"	6'-6"	3 1/2"	4000	6000	8"
7'-6"	7'-0"	3 1/2"	4000	6000	8"
8'-0"	7'-6"	3 1/2"	4000	6000	8"
8'-6"	8'-0"	3 1/2"	4000	6000	6"
9'-0"	8'-6"	3 1/2"	4000	6000	6"
9'-6"	9'-0"	3 1/2"	4000	6000	6"
10'-0"	9'-6"	3 1/2"	5000	6000	5"

TABLE B – DECK PANEL DESIGN (BULB-TEE GIRDER)

C-C GIRDER SPACING	PANEL LENGTH	PANEL THICKNESS	f'ci (PSI)	f'c (PSI)	STRAND SPACING
8'-0"	4'-10"	3 1/2"	4000	6000	6"
8'-6"	5'-4"	3 1/2"	4000	6000	6"
9'-0"	5'-10"	3 1/2"	4000	6000	6"
9'-6"	6'-4"	3 1/2"	4000	6000	6"
10'-0"	6'-10"	3 1/2"	4000	6000	6"
10'-6"	7'-4"	3 1/2"	4000	6000	6"
11'-0"	7'-10"	3 1/2"	4000	6000	6"
11'-6"	8'-4"	3 1/2"	4000	6000	6"
12'-0"	8'-10"	3 1/2"	5000	6000	5"

TABLE C – GIRDER DEFLECTIONS DUE TO DECK PANEL DEAD LOAD

	0L	.1L	.2L	.3L	.4L	.5L	.6L	.7L	.8L	.9L	1.0L
SPAN 1	.XX	.XX	.XX	.XX	.XX	.XX	.XX	.XX	.XX	.XX	.XX
SPAN 2	.XX	.XX	.XX	.XX	.XX	.XX	.XX	.XX	.XX	.XX	.XX
SPAN 3	.XX	.XX	.XX	.XX	.XX	.XX	.XX	.XX	.XX	.XX	.XX

PRESTRESSED CONCRETE DECK PANEL NOTES

(1) CONCRETE STRENGTH: f'c = 6.000 PSI MINIMUM AT 28 DAYS; f'ci = 4.000 PSI MINIMUM } SEE TABLE A & B DECK PANEL DESIGN

(2) PRESTRESSING STRANDS SHALL BE 3/8 in. DIAMETER, GRADE 270 SEVEN WIRE LOW-RELAXATION TYPE, CONFORMING TO THE REQUIREMENTS OF ASTM A416. ALL STRANDS SHALL BE PULLED TO HAVE A NET TENSION OF 17.2 KIPS PER STRAND AFTER ALLOWING FOR CHUCK SLIPPAGE.

(3) THE TOP SURFACE OF THE DECK PANELS SHALL BE BROOMED TO A SURFACE ROUGHNESS OF 0.06 in. BROOM THE SURFACE PARALLEL TO THE STRAND.

(4) IF HIGH DENSITY EXPANDED POLYSTYRENE FOAM IS USED AS A TEMPORARY SUPPORT, IT SHALL BE CUT IN THE FIELD TO THE REQUIRED HEIGHT AND AFFIXED TO THE GIRDERS WITH AN APPROVED HIGH STRENGTH ADHESIVE.

(5) PANEL LIFTING LOCATIONS SHOWN ARE ADVISORY ONLY. ACTUAL LIFTING LOCATIONS SHALL BE DETERMINED BY THE FABRICATOR AND INDICATED ON THE SHOP DRAWINGS.

(6) CORROSION INHIBITOR (CALCIUM NITRITE) ADMIXTURE SHALL BE USED.

(7) SEE STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS FOR SECTIONS 520 AND 528 FOR ADDITIONAL INFORMATION.

(8) IF LEVELING SCREWS ARE USED, THEY SHALL BE COMPLETELY REMOVED AFTER THE GROUTING OPERATIONS AND PRIOR TO DECK PLACEMENT. HOLES LEFT BY LEVELING SCREWS SHALL BE FILLED WITH AN APPROVED GROUT PRIOR TO DECK PLACEMENT.

(9) TEMPORARY BRACING BETWEEN ENDS OF PANELS SHALL BE SUPPLIED AS REQUIRED TO PREVENT PANEL MOVEMENT TRANSVERSE TO THE GIRDERS.

(10) THE FOLLOWING DECK PANEL DESIGN INFORMATION SHALL BE USED FOR THIS PROJECT:

C-C GIRDER SPACING = XX
PANEL LENGTH = XX
PANEL THICKNESS = XX

CONCRETE STRENGTHS
f'ci = XX
f'c = XX

STRAND SPACING = XX

MULTI SPANS ONLY:
REINFORCEMENT REQUIREMENTS IN TOP MAT OVER PIER TO MEET AASHTO 10.38.4.3
BAR SIZE = XX
BAR SPACING = XX

(11) METRIC DIMENSIONS WILL BE SUPPLIED BY THE BUREAU OF BRIDGE DESIGN UPON REQUEST.

- LIVE LOAD = HS25
- ALLOWABLE TENSION IN CONCRETE = $6\sqrt{f'c}$
- MAXIMUM INITAL COMPRESSION = 750 psi (W/ f'ci = 4000 psi)
- C-I-P DECK THICKNESS = 5"
- PAVEMENT THICKNESS = 2"
- STEEL FLANGE WIDTH = 12"
- GROUT DAM WIDTH = 1 1/2"

NOTES TO DESIGNER:

1) A HAUNCH THICKNESS SHALL BE PROVIDED THAT ACCOUNTS FOR GIRDER CAMBER TOLERANCE, ADDITIONAL DECK THICKNESS DUE TO DECK PANELS, FIELD SPLICE PLATES AND ANY OTHER DETAIL THAT MIGHT IMPACT THE 1" MINIMUM HAUNCH THICKNESS REQUIREMENT. THE INTENT IS TO HOLD FINISHED GRADE ELEVATIONS AND TAKE UP CHANGES IN DECK THICKNESS WITHIN THE HAUNCH PROVIDED.

2) WHEN C-C GIRDER SPACING DIFFERS FROM THOSE LISTED IN TABLES A & B, OR IF THE FLANGE WIDTH IS NOT 12", THE ACTUAL PANEL LENGTH DETAILED IN NOTE #10 (THIS SHEET) SHALL BE CALCULATED. THE PANEL DESIGN SHALL BE BASED ON THE NEXT LONGER TABULATED C-C GIRDER SPACING.

3) THE DESIGNER SHOULD NOTE THAT IN MOST CASES, AN ADDITIONAL 1/2" OF DECK DEAD LOAD SHOULD BE INCLUDED IN THE DESIGN OF THE GIRDERS (8 1/2" TOTAL THICKNESS MINIMUM). THE BOTTOM OF DECK SLAB ELEVATIONS DETAILED IN THE PLANS SHALL BE BASED ON THE FULL DEPTH CAST IN PLACE DECK DETAILED FOR USE AND NOT TAKE ACCOUNT OF THE ADDITIONAL 1/2" OF DECK DEAD LOAD.

4) HORIZONTAL SHEAR CONNECTOR HEIGHTS MAY NEED ADJUSTMENT TO ACCOMODATE THIS OPTION.

DECK SLAB ELEVATION NOTES

1) AFTER THE GIRDERS ARE ERECTED AND BEFORE PRECAST DECK PANELS ARE SET, ELEVATIONS ON THE TOP FLANGE OF THE GIRDERS ARE TO BE OBTAINED AT THE POINTS INDICATED IN "BOTTOM OF SLAB ELEVATION TABLE" DETAILED IN THE PLANS AND GIRDER HAUNCH DETAILS ON THIS SHEET.

2) THE BOTTOM OF SLAB ELEVATIONS SHALL BE ADJUSTED BY THE DIFFERANCE BETWEEN THE CAST-IN-PLACE DECK THICKNESS AND THE TOTAL COMPOSITE DECK THICKNESS.

SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
English/DKPANLS	DECK PANELS	AS NOTED

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN

TOWN | BRIDGE NO. | STATE PROJECT

LOCATION

PRECAST CONCRETE DECK PANEL DETAILS

BRIDGE SHEET OF

REVISIONS AFTER PROPOSAL	BY	DATE		BY	DATE
	DESIGNED	MGL	4/02	CHECKED PES	4/02
	DRAWN	GMC	4/02	CHECKED ACJ	4/02
	QUANTITIES			CHECKED	
	ISSUE DATE	4/02	FEDERAL PROJECT NO.	SHEET NO.	TOTAL SHEETS
	REV. DATE	5/04			

FILE NUMBER